

## **Three Bond 2273D**

### **Thixotropic Single Component Epoxy Resin**

### **High Temperature Cure**

Three Bond TB2273D is a thixotropic single component epoxy resin adhesive that has high temperature curing capabilities suitable for instant induction curing with HF-coils. After curing the hardened material has excellent electrical and mechanical properties such as good chemical resistance, high strength and good adhesion.

Unlike two-part adhesives, this product does not require weighing, mixing or defoaming. It contains more than 99% non-volatile matter, resulting in minimal out-gassing and shrinkage upon curing ensuring a safe working environment.

#### **Features**

- Curing at high temperatures 100 ~ 200°C
- Easy to apply with various dispensing systems (manual to fully automatic)
- Very high strength and adhesion
- Excellent heat resistance
- Excellent electrical insulation

#### **Applications**

- For general bonding
- Adhesion of yokes and magnets
- Sealing electric components
- Fixing of connection wires
- Filling and adhesion of lamina gaps
- Encapsulation of relays

#### **Properties before Curing**

<b>Properties</b>	<b>Result</b>	<b>Unit</b>
Colour	Off White	
Viscosity at 25°C	75	Pa·s
Density at 25°C	1.2	g/cm <sup>3</sup>
Grain size of hardener particles	< 100	µm
Thixotropic Index (4 : 20 rpm)	2.0	
Curing time at 100°C	90	min
120°C	60	min
150°C	30	min
175°C	15	min
200°C	5	min

**Properties after Curing**

Properties	Result	Unit
Shore-Hardness	86	Shore D
Shear strength Fe/Fe at 25°C 100°C 130°C 160°C	35 25 20 10	MPa
Peel strength Fe/Fe at 25°C	8,000	N/m
Glass transition temperature TMA	120	°C
Elongation	10	%
Coefficient of thermal expansion TMA $\alpha_1$	$6.2 \times 10^{-5}$	/°C
$\alpha_2$	$16.8 \times 10^{-5}$	/°C

Curing conditions: 150°C x 30 minutes

**Instructions****Safety**

- This product may cause irritation when in contact with skin for a prolonged period. If the compound comes into contact with skin, wipe off with paper, towel or cloth. Wash affected area with warm soapy water.
- Do not ingest. In the event that this product is ingested, consult a physician immediately.
- In case of eye contact, do not blink or rub eyes. Wash under running water for 15 minutes. Consult a physician immediately.
- In case of abnormal reaction, stop using and consult a physician.
- Persons with allergies, or who are sensitive should not use this product before medical examination.
- For further information see the relevant Material Safety Data Sheet.

**Cleaning of Works**

Although the presence of a small amount of dirt, grease or oil on the fitting surfaces does not affect the practical bonding strength, it is recommended to clean the work in order to fully use the performance of the adhesive. However, the use of hydrocarbon cleaners and light oils should be avoided due to residual deposits.

**Directions for Use**

Apply a thin coat or bead on one of the fitting faces and join the parts, position correctly and fix them under slight pressure.

The curing conditions are stated above, please follow the given temperatures and times in order to obtain optimal adhesion. The curing temperature is subjected to the type, size and thermal capacity of adherents.

**Storage**

This product is a single component epoxy adhesive. Storing at high temperatures over a long period is not advised as it will result in a decrease in thixotropic properties, increase in viscosity, sedimentation of the filler and reduction in the curing ability. The product must be stored in its original container, tightly closed in a dark, dry, sufficiently ventilated and cool place at 5 ~ 10°C.

In order to prevent premature ageing of the adhesive, it should be stored away from sources of humidity, amines, alkalis or dioxides.

For further information see the relevant Material Safety Data Sheet.

***Packing***

310ml cartridge and 20 kg pail cans (special packing on request).

Shelf life:	310ml	7 months
	20kg	6 months

***Disclaimer*****For Industrial Use Only**

(Do not use for household purposes)

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